TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

STEM ADVISORY COUNCIL BROADBAND COMMITTEE

Co-Chair John Carver, Superintendent, Howard-Winneshiek Community School District
Co-Chair Robert von Wolffradt, Chief Information Officer, State of Iowa
Amy Kuhlers, Program Manager, Connect Iowa
Robert Denson, President, Des Moines Area Community College
Dave Duncan, President, Iowa Telecommunication Association
Philip Groner, Iowa Communication Network
Karl Hehr, Director of Technology Services, Ames Community Schools District
Galen Howsare, Chief Financial Officer, Iowa Association of School Boards
Karen Randall, Keystone Area Education Association
Michael Sadler, Assistant VP for Public Policy
Larry Siegel, Iowa School Finance and Information System Services
Jeff Weld, Executive Director, Governor's STEM Advisory Council
Josh Byrnes, State Representative, District 14
Steven Sodders, State Senator, District 36

STEM ADVISORY COUNCIL BROADBAND COMMITTEE

Meeting Minutes
October 8, 2013, 9:00 – 10:30
Iowa Utilities Board, 1375 E Court Ave, Des Moines, IA
Conference Room 1-2

Committee Members Present:

John Carver	Robert von Wolffradt
Galen Howsare	Phillip Groner
Amy Kuhlers	Michael Sadler
Dave Duncan	Jeff Weld
Rob Denson	Karen Randall (via phone)

Committee Members Absent:

Josh Byrnes	Karl Hehr
Larry Siegel	Steve Sodders

Other Attendees:

Tom Fisher, RIITA	Tom Lampe, Dept. of Public Safety
Don Miller, NW Tele. Coop. Assoc.	Keri Schatz, Howard-Winneshiek CSD
Sherry Timmins, IA Ec. Dev. Authority	Sheila Navis, Rural IA Ind. Tel. Assoc.
Kim Weigel, Howard-Winneshiek CSD	Wil Walling, Iowa Network Services
Phil Wise, IA Dept. of Ed.	Curtis Dean, Iowa Assoc. of Mun. Utilities
Scott Weiser, Windstream Comm.	Matt Gronewald, IA Dept. of Ag
Marty Schwager, Iowa Farm Bureau	Jim Bogner, ISICSB
Scott Bohler, Frontier Communications	Robin Harlow, ISAC
Ed Pardini, Mediacom	Erik Skovgard, Lincoln Savings Bank
Suzanne Smith, Iowa Utilities Board	Fred Eastman, Mercy Rural Telemedicine Cons.

Other Attendees (via phone):

John Stineman, ICA, HTA	Beth Canuteson, AT&T
Wauneta Brown, AT&T	Tom Beaver, HeathNet Connect

I. **Call to Order and Introductions:**

Meeting called to order at 9:05 by Co-Chair Carver. Committee members and guest attendees offered introductions

II. **Approval of Agenda:**

Groner moved to approve the agenda, Howsare seconded, unanimously approved.

III. **Approval of 9-24-13 Minutes:**

Duncan moved to approve the agenda pending changing the word 'proceeds' with 'proceeding' in first paragraph, page 4. Groner seconded, unanimously approved.

IV. **Overview of 10-8-13 Agenda:**

Carver provided an overview of discussion topics to be covered during the meeting, which include the continuation of stakeholder presentations for input, with comments also being solicited electronically; work session to begin creating a document for recommendations to Governor and Legislature; and allowing time for general public comment.

Weld added a general comment that access to high speed broadband should be considered a civil right, adding economic competitiveness is key and fits with STEM initiatives. Carver informed attendees that Weld is the Executive Director of the state's STEM Advisory Council, of which the current Broadband Committee was originally developed to serve.

V. **Stakeholder Comments:**

a) Jim Bogner, Iowa Statewide Interoperable Communications System Board (also see posted comments):

Bogner provided historical information on the need for interoperable communications, stating that after 9-11, the federal government determined public safety agencies needed a reliable interoperable network. In 2007, the Iowa passed legislation creating an Interoperable Communications Board to review communications needs, as Iowa does not have a statewide network. The Board's mission is to bring all public safety organizations together, as well as to ensure data and systems interoperability and to bring in the private sector for partnerships. The Board is comprised of many stakeholders, and Bogner supports the Board as Coordinator.

FCC was reviewing how to complement public safety radio frequencies, and issued 21 special licenses to explore how a data communications build might look. Iowa was issued one of the licenses, although did not

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

receive project funding. Under the license, DPS hosted two demos utilizing 4G technology to illustrate how live data could be utilized by many public safety agencies working on an accident or disaster.

In 2012, the federal government passed creating the FirstNet initiative to build a nationwide interoperable network to include radio and broadband capabilities. The initiative is led by a nationally appointed board. Board is now trying to determine how the network can be developed, and is the biggest public undertaking by public safety community. Iowa has now received some federal grant funds for the first stage of planning, which includes public outreach and education.

In creating the network, legislation requires leveraging existing infrastructure, so important to know where commercial infrastructure exists and how it might complement public safety needs and vice versa? The next phase of planning will include data collection and surveying commercial assets of cellular providers and others to hopefully leverage partnerships. The timeframe for completion is still unknown, as more info and direction is needed from FirstNet, but it will be important to continue to communicate and collaborate with the Broadband Committee moving forward.

Q & A:

   i.   Carver: Are you looking at accessing an already existing backbone, or creating their owner or dedicated system? Bogner: Undetermined as of yet.

  ii.   Carver: Will the network be in regular use on a day-to-day basis, and then utilized solely by public safety during a disaster or other need? Bogner: Yes, designed to be everyday network for public safety needs, and then can be pulled to dedicated uses when needed, so non-essential services wouldn't have primary access. This would be a separate and parallel network dedicated to public safety needs.

 iii.   Kuhlers asked if there would be feasibility of using new infrastructure build out for other users – for example if new hardened towers are build could there be shared antennae placement with private networks? Bogner: Legislation does allow for use by secondary users, such as utility companies.

  iv.   Carver: Is there a timeline for design specs? Bogner: FirstNet has issues RFI's out for possible design of the network, and hopefully will know more by late fall, with further discussions happening on what Iowa might look like early in 2015. Still many unknowns. Weld: Will the RFI favor rural states? Bogner: The concept will not ignore rural states for concentration on urban areas.

   v.   Duncan: Interested in that the concept is based on an asset survey, and he's interested in further conversation as his membership may have assets that could be made available at lower

costs. Bogner: That's what we'll be looking at, having some preliminary conversations, but again, too many unknowns at this point.

b. Scott Bohler, Frontier Communications (also see posted comments):

Frontier is a nationwide telephone provider with 36 exchanges in Iowa for traditional voice and broadband. Provide wired broadband to most customers. Remaining unserved pockets would take more investment, but they do provide satellite service if customer desires.

Their primary barrier is the cost of build out to reach remote customers, as expected revenues wouldn't recover investment. Related to cost is transport – they need to move this traffic back to backbone, which is a hidden cost most don't realize. Customers are using more and more bandwidth every day, and they might build a transport network to meet customers' needs this year but not next year as usage grows. Another issue is the loss of large customers, such as hospitals and schools, to municipal or publically funded network, which affects their ability to offer competitive pricing to residential customers.

Another concern is customer adoption. Lower number of users also affects pricing. Barriers that could be looked at in trying to offset this barrier could be addressing access costs and device costs for lower income individuals. May want to look at a financial program offered by Nebraska that Frontier has utilized in their service area there to help offset some build out costs. Additionally the FCC has some program models in place for trying to address adoption issues.

Q & A:

i. Howsare: If the state were to provide a matching fund from the state, would there be criteria to look at? Bohler: Yes, using the FCC criteria of 4 Mb down 1 Mb up.

ii. Carver: If looking at a last mile solution, would that be wired or wireless? Bohler: Wired is general, but can look to wireless if necessary. Carver: Have talked to a couple of companies in north Iowa that are serving customers via connections on grain elevators, and are reaching speeds of 20 Mb using wireless. Bohler: There will be a variety of end solutions, and the 4:1 is just a baseline.

iii. Weld: Can you provide any details on the Nebraska program? Bohler: Last year was the first year and there was $4 million available. Companies may choose match, but at least 25%. Twelve programs were approved by the state. Now in second year of funding. Other requirements included the necessity to provide at least 4 Mb download and 1 Mb upload speeds for five years, as well as reporting requirements.

iv. Duncan: Heard you can define your service territory, but you have to serve all within that territory, is that correct? Bohler: Yes.

c) Fred Eastman, Mercy Rural Telemedicine Consortium (see also posted comments):

Consortium was formed in 1994, and primarily provides interactive video to hospitals, including 30 hospitals in Iowa and two in Nebraska. They are also now providing imaging and reading services. The consortium was one of 69 programs nationwide funded for8 telemedicine project.

Every day that goes by, more and more needs for access are identified. For example, last year 60% of doctors wrote e-scripts, 30% went in an electronic form. It's important that clinics and pharmacies have connectivity in addition to clinics and doctors.

They want to be able to provide lowest level of care keep down cost – ideally allow patient to be treated at home, or at a local clinic, for example being able to meet with a specialist via videoconferencing. For this, robust access is critical to ensure that video links don't get dropped.

Some suggestions – There is some FCC funding available for telemedicine. Look at these opportunities for Iowa. Look at other countries – Finland is the first country to ascertain access to broadband is a legal right for citizens and is now the most highly ranked country for broadband access.

Hospitals will likely need more than the FCC's recommended 1 Mb of bandwidth. As an example, Magellan, Iowa's Medicaid program provider, recommends that for providing mental health services should download should be at least 5 MG. For clinics- 25 MB may be too small. Additionally, sharing patient data and images requires a large bandwidth capacity as well as security.

HealthCare Connect Funds – helped some hospitals bring down costs. Not all Iowa hospitals connected.

Q & A:

i. Carver: You'd commented on Finland, research there shows that 86% of population lives within 2 km of a 100 Mb connection. In looking at delivery to rural Iowa we might want to consider.

ii. Weld: Are hospitals considered a profit center for providers? Eastman: Yes, they are many times the largest customer in a community.

iii. Sadler: In your comments you mention you are not yet to the unified backbone you'd like to achieve – thoughts? Eastman: In other locations, regions seem to be piecing that together. We may need to look at a regional solution.

iv. Comment from Don Miller in audience: Would make a recommendation that we identify where all the fiber in the state is located – there is a lot of fiber already available. Also, in reference to FirstNet, they would not need a private network. Technology allows for the ability to separate uses on already existing fiber. He also echoed that taking the anchor institutions away from the private providers, that also takes a large revenue source from them. On the wireless providers

placing antennas on grain elevators, his company has also placed antennas on elevators, and they have experienced losses due to weather-related events, so this might be considered more of a short-term solution.

v. Comment from Erik Skovgard in audience: Their organization has issues with some of their rural locations where the city cannot support the capacity they need. There is a difference between supplying a service and providing a reliable service.

d) Robin Harlow, ISAC (see also posted survey summary):

Harlow distributed a survey based on the questions included on the stakeholder input form, to the member counties. Received 170 to 180 results, however other than the personal information (name, organization), half did not answer the questions, which he thinks shows a need for an educational opportunity for them to understand the importance of broadband in rural communities to economic development and opportunities for their communities.

Twice a year ISAC offers education to elected officials on importance of broadband in their counties. Additionally they've started a program where technology managers from various counties get together to perform independent assessment of technology infrastructure for other counties that may not have a technology manager. Ten have been completed to date. Some of their findings indicate that access to broadband delivery and access is fragmented. County struggles with ICN because the state offices have access and county offices do not. Feels all levels of government need to be served at same level.

Groner clarified that under Iowa code, cities and counties are not authorized users to ICN, however, users within the facility, example county court house users can be an authorized user. Legislation would need to be involved with changes to the current legislation, and that may be looked at in the upcoming session.

Harlow remarked that the survey reiterates that what the county is currently using for access – DSL, cable, etc. and what they receive for quality of service is dependent on what is currently available, and what is needed, and the resources available to implement. He feels it is important to educate officials on uses, needs and importance to take away some of the sticker shock on cost of technology.

Sadler: Some of the comments indicate that broadband should be available at a reasonable cost. Any thoughts on what is considered 'reasonable'? Harlow: A bit of a moving target, as some offices are using what almost consists of a home broadband service, but are not paying much. If they were educated on value of increasing capacity, those costs would go up, but again, that education could alleviate some of the issues with having to pay more for better service.

e) Ed Pardini, Mediacom and Iowa Cable Television Association (see posted comments):

Q & A:

a. Howsare: What is the relationship between the grant and what the ISP provides? Pardini: As an example of the California Services Fund (CASF), in the town Kernville CA, all phone circuits provided by AT&T and Verison, as well as the Mediacom network, are at maximum capacity. Under CASF they received a grant of about $300,000 to construct 33 miles of fiber, so their build will represent about 75% of that. That will be the only other option for residents of that area to get more high speed services. Currently, an existing customer much leave the network in order for a new customer to come in. The grant helps to defray some of the construction costs and make it a profitable enough venture that they can invest in.

b. Howsare: Does Mediacom operate in other states that have grant programs for comparison? Pardini: We believe the CASF to be a viable model to look at. Other federal grants programs have been used to provide funding to projects that compete with already existing services offered through local ISP, and Mediacom is specifically concerned about those types of projects. The CASF does not follow those criteria.

f) Duncan offered a closing summary showing challenges for the committee: The need for some organizations, such as hospitals, to have superfast capacity; the need to leave no Iowan unconnected to at least some broadband; and the need for a statewide ubiquitous network for public safety. It would be nice to have all, but that is unlikely as each require different steps to get there. The funding programs in Nebraska and California are two possible models to look at for helping with access issues, but he also thinks it will be important to address education and digital literacy. Duncan referenced a recent PEW research report that found 15% of adults don't use the Internet, and of those, 34% listed relevance as the primary factor with 32% indicating lack of adequate skills (too difficult to use). Only 7% indicated there was lack of access. These nationwide figures are also reflective of Connect Iowa survey findings. Additionally, Iowa Workforce recently surveyed 62,873 adults on digital skills that would be needed to obtain a job. On a sliding scale of 1 to 5, with five being the highest skill level, only 5% gave themselves a 5, and 76% gave themselves a 3 or below. This indicates we need to invest in digital literacy training to get our workforce better equipped for today's job needs.

g) Carver: Might want to look at two strategies, one for retraining, and a second to prepare a digital environment so that students who are graduating with high digital skills, are encouraged to stay in town/state instead of having to move to where more robust access is available.

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

STEM ADVISORY COUNCIL BROADBAND COMMITTEE

VI.   Adjourn

Due to time constraints, other agenda items were not addressed. Public comments were taken throughout the meeting. The meeting adjourned at 10:45.